



Energy Efficiency/Renewable Energy (EE/RE) Measures for Early Action Compacts

Clean Air Through Energy Efficiency Workshop
San Antonio, Texas
March 30, 2004

Eve Hou
Air Quality Planning Section



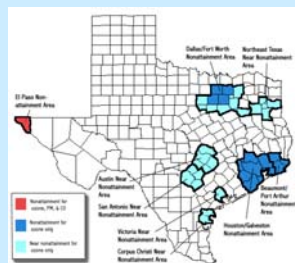
Presentation Overview

- Air Quality in San Antonio
- Early Action Compact Initiative
- EE/RE and Air Quality
- TCEQ Guide for Crediting EE/RE

Presentation Overview



Ozone Air Pollution in Texas

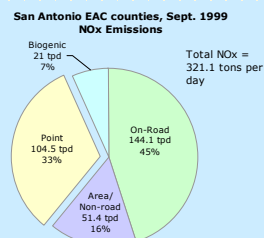


- Ground-level ozone is the key air pollution issue in Texas
- NOx and VOC are key pollutants
- SA is near nonattainment for national 1-hr ozone standard
- SA monitoring nonattainment for national 8-hr ozone standard

Air Quality in San Antonio



Air Emissions in San Antonio



Source: AACOG Emissions Inventory
NOTE: These are based on emissions averaged over the week

Air Quality in San Antonio



San Antonio's EAC Initiative

- Areas in nonattainment of national air quality standards required to submit State Implementation Plan (SIP)
- SA monitoring nonattainment of national 8-hr ozone std
- SA took Early Action Compact initiative
 - Early planning, implementation and emission reductions leading to expeditious attainment and maintenance of the national 8-hr ozone standard
 - Local control of the measures to be employed
 - State support to ensure technical integrity of the early action plan
 - Formal incorporation of the early action plan into the SIP

Early Action Compact Initiative



EAC Deadlines

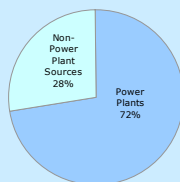
- Signed Compact in December 31, 2002
- EAC Plan due March 31, 2004
 - State of the science emissions inventory and modeling
 - Locally selected enforceable control measures
 - Maintenance for growth provisions
 - Public involvement and education
- State puts into SIP by December 31, 2004
- **EAC can include energy efficiency as a measure!**

Early Action Compact Initiative



Air Emissions and Energy Production

Point Source NO_x Emissions in the San Antonio Area by Source (1999)



Source: AACOG Emissions Inventory
NOTE: These are based on emissions averaged over the week

Energy Efficiency and Air Quality



Air Emissions Growth in San Antonio

- Major growth projects related to power plants in San Antonio region
 - City Public Service planned coal power plant
 - 5.92 tpd NO_x by 2012
 - CPS planned natural gas plant
 - 0.72 tpd NO_x by 2012
 - Guadalupe county natural gas power plants
 - 7.58 tpd NO_x by 2012

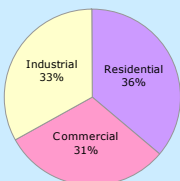
Source: Attainment Demonstration for the San Antonio Early Action Compact Region, Section 6.3.1 New Point Sources
http://www.aacog.com/sip/SA%20SIP_Attain%20Demo_v8.pdf

Energy Efficiency and Air Quality



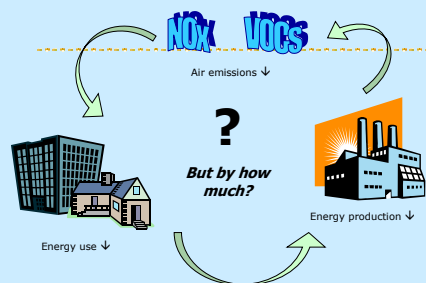
Energy Consumption by Source

Texas Electrical Energy Consumption (1999)



Source: DOE/EIA-0214(99), MAY 2001 "State Energy Data Report 1999"

Energy Efficiency and Air Quality



Energy Efficiency and Air Quality



Air Emissions and Energy Efficiency

- Not a direct relationship for several reasons
 - Power plants may be outside the SA region
 - Power plants emit different levels
 - Some plants easier to "power down" than others
 - Transmission loss
- How to calculate for EAC?

Energy Efficiency and Air Quality



History of Efforts to Calculate

- Dec 2002 HGA SIP included protocol for calculating NO_x reductions from implementing SB 5 and SB 7 projects
- TCEQ contracted with Energy Systems Laboratory (ESL) to develop a calculator to estimate emission reductions
 - To be completed by August 2004
- TCEQ developed an interim process which is outlined in *Incorporating Energy Efficiency/ Renewable Energy (EE/RE) Projects into the SIP - A Guide for Local Entities*

TCEQ Guide for Crediting EE/RE



Purpose of Guide

- To inform local areas working on EACs and SIPs that they can get credit for energy efficiency measures*
- To give examples of the types of EE/RE projects and technologies creditable
- To outline the process and players involved in including EE/RE as a measure in the SIP
- To describe the role of the local entity in this process

*With the exception of the Houston/Galveston area which is under a mass cap and trade program.



Process

1. Report projects to SECO*
2. Estimate associated energy savings
3. Calculate associated emissions reductions
4. Demonstrate that EPA criteria are met
5. Monitor and report results*

*Key role played by political subdivisions



1. Report projects to SECO

- Collect/report information on eligible EE/RE projects to SECO
- SB 5 reporting requirement is foundation for TCEQ's data collection
- ESL and SECO have expanded SECO's reporting website to allow users to submit more information
- The additional information allows your region to take more credit in the SIP for your efforts



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2. Estimate Energy Savings 3. Calculate Emissions Reductions

- Assistance is available from ESL



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*Key role played by political subdivisions



4. Demonstrate that EPA criteria are met

- TCEQ to work with EPA to determine the documentation required
- TCEQ to work with political subdivisions to collect the required additional documentation
- TCEQ to work with ESL and EPA to ensure that calculations are acceptable to EPA

TCEQ Guide for Crediting EE/RE



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TCEQ Guide for Crediting EE/RE



5. Monitor/Report Results

- EPA requires evaluation of effectiveness of project/program
- Collect data on program/project performance (i.e. participation levels, actual energy usage)
- In the future, the web reporting forms will allow you to report post-project results on an annual basis

TCEQ Guide for Crediting EE/RE



What's in it for me?

- Currently tradable/sellable credits cannot be generated from EE/RE projects
- Clean air/health
- Attainment of National Ambient Air Quality Standards (NAAQS)
 - Avoid stringent requirements
 - Prevent loss of federal highway funds
 - Prevent businesses from locating elsewhere

TCEQ Guide for Crediting EE/RE



A Look to the Future

- Including EE/RE projects/programs from more energy users into the SIP
 - Federal entities (significant for San Antonio!)
 - Private corporations
 - Political subdivisions not currently required to report to SECO under SB5
- ESL Calculator scheduled to be completed by summer 2004

TCEQ Guide for Crediting EE/RE



For More Information

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